

### REMARKS

This is a full and timely response to the non-final Official Action mailed **February 10, 2009** (the “Office Action” or “Action”). Reconsideration of the application in light of the above amendments and the following remarks is respectfully requested.

#### Improper Action:

Applicant notes, with no little amount of frustration, that the present Office Action is improper under 37 C.F.R. § 1.198 and must be withdrawn.

Under 37 C.F.R. § 1.198, “[w]hen a decision by the Board of Patent Appeals and Interferences on appeal has become final for judicial review, prosecution of the proceeding before the primary examiner will **not** be reopened or reconsidered by the primary examiner except under the provisions of § 1.114 or § 41.50 of this title **without the written authority of the Director**, and then only for the consideration of matters not already adjudicated, sufficient cause being shown.” (Emphasis added).

Under 37 C.F.R. § 1.9, “Director as used in this chapter, except for part 10 of this section, means **the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office**.” (Emphasis added). Consequently, following a final decision by the Board of Patent Appeals and Interferences, prosecution may not be reopened with the written authority of the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

In the current Office Action, the reopening of prosecution has been authorized by Gregory L. Mills, a supervisory patent examiner of Art Unit 1700. (Action, p. 21). The Action characterizes Mr. Mills as “the TC Director’s designee.” (Action, p. 20). This makes the present Office Action clearly improper.

First, as demonstrated above, the rules of 37 C.F.R. vest authority to reopen prosecution following a Board decision, *not* in the Director of a Technology Center, but only in the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office. Moreover, the rules make no provision for this authority to be delegated to another, lesser decision maker.

Consequently, Applicant respectfully requests that the present amendment be entered under 37 C.F.R. §1.312 and the application passed to issuance. Otherwise, authority to reopen prosecution must be obtained in writing from the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office.

Claim Status:

Claims 19-54 were previously cancelled without prejudice or disclaimer. By the forgoing amendment, various claims have been amended, and claims 57-67 have been cancelled without prejudice or disclaimer. Thus, claims 1-18, 55 and 56 are currently pending for further action.

Objection to Specification:

In the outstanding Office Action, the Examiner objected to the specification because of an alleged typographical error in p. 6. (Action, p. 2). However, Applicant has consulted p. 6 of the application as filed and is unable to find the error alleged in the Action. Applicant has further conducted a word search of the application file and does not find any instance anywhere of the error noted in the Action. Consequently, the objection to the specification should be reconsidered and withdrawn.

35 U.S.C. § 112, second paragraph:

In the recent Office Action, claims 12 and 13 were rejected under 35 U.S.C. § 112, second paragraph, as not having proper antecedent basis for the recitation “said porous substrate.” While Applicant does not necessarily agree that any of these claims were indefinite, claim 1 has been amended herein to address the issue raised by the Examiner under 35 U.S.C. § 112, second paragraph. Following this amendment, all the remaining claims are believed to be in compliance with 35 U.S.C. § 112 and notice to that effect is respectfully requested.

Prior Art:

(1) Claims 1, 10-13, 55-59 and 61-65 were rejected under 35 U.S.C. §102(b) as anticipated by WO 01/94668 to Furuya (“Furuya”). For at least the following reasons, this rejection should be reconsidered and withdrawn.

Claim 1 recites:

A method of manufacturing an electrolyte comprising:  
coupling a porous substrate to a charged electrode;  
electrodepositing a polymeric electrolyte on said porous substrate including in pores of said porous substrate; and  
coupling said electrolyte and porous substrate to an anode, a cathode and a catalyst.

Support for the amendment to claim 1 can be found in Applicant’s originally filed specification at, for example, paragraphs 0025 and 0037 and Fig. 3, step 350. Furuya clearly does not teach or suggest the claimed method in which a porous substrate is used to receive a polymeric electrolyte by electro deposition, including in the pores of the substrate. Furuya further does not teach or suggest that both the electrolyte and porous substrate are then coupled to an anode, cathode and catalyst to form a fuel cell assembly.

“A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. Therefore, for at least the reasons explained here, the rejection based on Furuya of claim 1 and its dependent claims should be reconsidered and withdrawn.

(2) Claims 2, 4-8 and 60 were rejected under 35 U.S.C. § 103(a) over the teachings of Furuya taken alone. This rejection should be reconsidered and withdrawn for at least the same reasons as given above in favor of the patentability of claim 1.

Claim 2:

Additionally, claim 2 recites “wherein said substrate comprises a conductive porous substrate; and said polymeric electrolyte coats and completely insulates an outer surface of said conductive porous substrate.” Support for the amendment to claim 2 can be found in Applicant’s originally filed specification at, for example, paragraph 0035.

Furuya clearly does not teach or suggest the claimed method in which the deposited polymeric electrolyte “coats and completely insulates an outer surface of said conductive porous substrate.” This subject matter is entirely outside the scope and content of Furuya.

The Supreme Court recently addressed the issue of obviousness in *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007). The Court stated that the *Graham v. John Deere Co. of Kansas City*, 383, U.S. 1 (1966), factors still control an obviousness inquiry. Under the analysis required by *Graham* to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the

prior art and the claim at issue in view of the ordinary skill in the art. In the present case, the scope and content of the prior art, as evidenced by Furuya, did not include the claimed subject matter, particularly the claimed method in which the deposited polymeric electrolyte “coats and completely insulates an outer surface of said conductive porous substrate.”

The differences between the cited prior art and the claimed subject matter are significant because the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 2 under 35 U.S.C. § 103 and *Graham*.

Claim 4:

Claim 4 now recites “wherein said porous substrate comprises steel wool.” Support for the amendment to claim 4 can be found in Applicant’s originally filed specification at, for example, paragraph 0027.

In contrast, Furuya clearly does not teach or suggest this subject matter. Consequently, Furuya will not support a rejection of claim 4 under 35 U.S.C. § 103 and *Graham*.

Claim 8:

Claim 8 recites “further comprising removing deposited polymeric electrolyte from an outer surface of said porous substrate, while leaving said polymeric electrolyte in pores of said porous substrate.” Support for the amendment to claim 8 can be found in Applicant’s originally filed specification at, for example, Fig. 4B and the corresponding description in the text.

In contrast, Furuya clearly does not teach or suggest this subject matter. Consequently, Furuya will not support a rejection of claim 8 under 35 U.S.C. § 103 and *Graham*.

(3) Claim 3 was rejected under 35 U.S.C. §103(a) over the combined teachings of Furuya and U.S. Patent No. 4,952,283 to Sypula et al. This rejection should be reconsidered and withdrawn for at least the same reasons as given above in favor of the patentability of claim 1.

(4) Claim 9 was rejected under 35 U.S.C. §103(a) over the combined teachings of Furuya and U.S. Patent App. Pub. No. 2001/0014409 to Cohen. This rejection should be reconsidered and withdrawn for at least the same reasons as given above in favor of the patentability of claim 1.

(5) Claims 1 and 14-18 were rejected under 35 U.S.C. §103(a) over the combined teachings of U.S. Patent No. 5,281,327 to Honda and Furuya. For at least the following reasons, this rejection should be reconsidered and withdrawn.

Claim 1:

Again, claim 1 recites:

A method of manufacturing an electrolyte comprising:  
coupling a porous substrate to a charged electrode;  
electrodepositing a polymeric electrolyte on said porous substrate including in pores of said porous substrate; and  
coupling said electrolyte and porous substrate to an anode, a cathode and a catalyst

In contrast, the combination of Honda and Furuya does not teach or suggest the claimed method in which a porous substrate is used to receive a polymeric electrolyte by electro deposition, including in the pores of the substrate. Neither of the references teaches or suggests this subject matter. Additionally, neither of the references teach or suggest that both the electrolyte and porous substrate are then coupled to an anode, cathode and catalyst to form a fuel cell assembly.

Again, under the analysis required by *Graham* to support a rejection under § 103, the scope and content of the prior art must first be determined, followed by an assessment of the differences between the prior art and the claim at issue in view of the ordinary skill in the art.

In the present case, the scope and content of the prior art, as evidenced by Honda and Furuya, did not include the claimed subject matter, particularly the claimed method in which a porous substrate is used to receive a polymeric electrolyte by electro deposition, including in the pores of the substrate and in which both the electrolyte and porous substrate are then coupled to an anode, cathode and catalyst to form a fuel cell assembly.

The differences between the cited prior art and the claimed subject matter are significant because the claimed subject matter provides features and advantages not known or available in the cited prior art. Consequently, the cited prior art will not support a rejection of claim 1 under 35 U.S.C. § 103 and *Graham*.

Claim 15:

Claim 15 recites:

The method of claim 1, in which said electrodepositing a polymeric electrolyte further comprises:

depositing charged polymeric electrolyte particles on a substrate by electrophoretic deposition;

subsequently, depositing additional charged polymeric electrolyte particles on said substrate by electrolytic deposition; and  
treating a surface of said substrate by removing polymeric electrolyte particles between said depositing of charged polymeric electrolyte particles and said depositing of additional charged polymeric electrolyte particles.

Support for the amendment to claim 15 can be found in Applicant's originally filed specification at, for example, Fig. 3, steps 310-330, and the corresponding description in the text.

In contrast, the combination of Honda and Furuya does not teach or suggest this claimed method. Consequently, the cited prior art will not support a rejection of claim 15 under 35 U.S.C. § 103 and *Graham*.

#### Double Patenting:

Claims 1, 10-12, 55, 57, 58 and 61-63 were *provisionally* rejected on grounds of non-statutory, obviousness-type double patenting in view of claims from U.S. Patent Application No. 10/705,486 in view of U.S. Patent App. No. 2002/0014412 to December. Because this is only a provisional rejection, Applicant need take no position at present on the overlap, if any, of the two applications.

However, as explained in the MPEP § 804, when a provisional double patenting rejection is the only rejection remaining in one of two co-pending applications, that application is to be allowed to issue. A terminal disclaimer may then be required in the second of the two applications. MPEP § 804 states:

If a "provisional" nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, ... the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer.  
(MPEP § 804).



Consequently, the present application should be passed immediately to issuance as explained herein.

Conclusion:

In view of the foregoing arguments, all claims are believed to be in condition for allowance over the prior art of record. Therefore, this response is believed to be a complete response to the Office Action. However, Applicant reserves the right to set forth further arguments in future papers supporting the patentability of any of the claims, including the separate patentability of the dependent claims not explicitly addressed herein. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed.

The absence of a reply to a specific rejection, issue or comment in the Office Action does not signify agreement with or concession of that rejection, issue or comment. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment. Further, for any instances in which the Examiner may seek to rely on Official Notice, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

If the Examiner has any comments or suggestions which could place this application in better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

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